

In the Specification

Please replace the paragraph beginning at page 12, line 10 with the following rewritten paragraph:

To make an eddy current measurement of thin film 103 at a plurality of locations on sample 104, the eddy current sensor 110 is placed at a fixed, known distance above the sample 104 while the eddy currents are excited in the conductive sample at a chosen frequency. The measurement area of the sample 104 is roughly comparable to the diameter of the exciting coil 112 in the eddy current sensor 110. A variation in the distance from the eddy current sensor 110 to the surface of the sample 104 from one measurement location to the next can significantly affect the magnitude and phase of the response signal of the eddy current sensor 110 degrading the accuracy and precision of the measurement. Thus, the eddy current sensor 110 should be placed a fixed distance above the sample 104 at each measurement location. For more information regarding placing an eddy current sensor a fixed distance above the surface of a sample, see U.S. Patent No. 4,849,694 and U.S. Serial No. 10/402,661, entitled "Eddy Current Sensor with Concentric Confocal Distance Sensor", filed March 28, 2003 and assigned to the same assignee as the present disclosure, disclosure, both of which are incorporated herein by reference.

Please replace the paragraph beginning at page 13, line 27 with the following rewritten paragraph:

Preferably, each of the measurement locations on the substrate 104 should have the same area density of trenches and vias. For example, measurement locations may be chosen with the same position within different die on the substrate 104. Where each measurement location has the same area density of trenches and vias, changes in resistance from one measurement location to the next will be due to changes in the thickness of the film 103 and not differences in plated surface area.